



Scottish Water

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Gairloch Waste Water Treatment Works

January 2022 Update



Since 2018, Scottish Water has been working with a local stakeholder group, initially to review proposed changes to Gairloch Waste Water Treatment Works (WWTW) and then to monitor their performance.

A new treatment process was installed at the WWTW and a pilot operating period began in winter 2019/20. The new process consisted of septic tanks, a disk filter and disinfection via ultraviolet (UV) light.

Improved reliability

A key reason for changing the treatment process was that the previous treatment technology had not been as reliable as was expected when it was installed. As a result, there was greater risk of the overflow at Lonemore pumping station operating outside very wet weather conditions - for example during regular maintenance work when half of the WWTW had to be taken offline for manual cleaning.

The chart above compares summer 2018 when the old treatment process was operating with summer 2020, after it had been replaced. Total rainfall over each period was very similar, but in 2018 there were untreated spills (dark blue bar) at Lonemore with combined duration of over 12.5 days, while in 2020 this was reduced to less than 1.5 days. While there will be significant variation from year to year linked with weather, this is an encouraging start.

Seasonal sampling of the water quality at both Sand and Gairloch beaches since the new treatment process was introduced has continued to meet 'excellent' standard on a consistent basis.

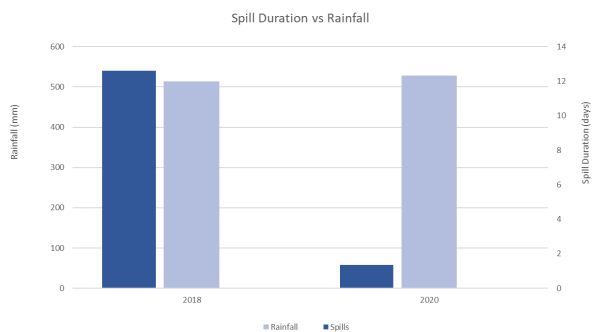


Chart comparing spills at Lonemore pumping station (dark blue bars) in summer 2018 (left) with summer 2020 (right), also showing similar total rainfall over each period (light blue bars)



Summer 2021 challenges

Despite positive bathing water quality results, there were challenges with the operation of the disk filter during summer 2020. After these began to affect performance of the UV in early summer 2021, temporary measures were put in place to remedy this quickly, while data was collected to understand the cause.

Stantec, who are world experts in the operation of UV systems, has reviewed a number of options to enhance the new treatment process with Scottish Water. This work has concluded that the disk filter should be replaced by a cloth filter, initially on a trial basis. This alternative type of filter is expected to remove finer particles in dry, summer conditions to ensure the UV can reliably meet the requirements of the site's discharge licence.

Addressing odour concerns

Members of the stakeholder group also raised concerns about odour experienced both at the WWTW site and from the sewer network. The performance data obtained at the WWTW in 2021 contributed to a fuller understanding of this. As a result, a temporary dosing system to address odour was installed at the Pier pumping station in September.



Temporary odour dosing system at Gairloch Pier Pumping Station

Initial feedback has been encouraging, but this will be monitored over the course of 2022. Please report any unpleasant odours linked to the sewer network or the WWTW to Scottish Water. There is an easy to use online reporting portal on Scottish Water's website at www.scottishwater.co.uk, or you can also email help@scottishwater.co.uk or call **0800 077 8778**. If successful over summer 2022, a permanent solution to enable longer term management of unpleasant odours will be proposed.

Winter 2021/22 trial period

As part of the pilot operating period, it was agreed that the new WWTW would operate without the filter and UV parts of the treatment process from November 2021 until March 2022. Over this winter period, SEPA is carrying out extra water quality sampling at Sand and Gairloch beaches to obtain a set of data outside the designated bathing season - and to allow the value of UV disinfection at this time of year to be considered.

More information about the stakeholder group's work and updates are available at www.scottishwater.co.uk/Gairloch.